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ROTOR FOR AN ELECTRIC MOTOR

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is entitled to the benefit of and incorporates by reference essential subject matter disclosed in international Patent Application No. PCT/DK2003/000862 filed on December 12, 2003 and German Patent Application No. 102 61 763.5 filed on December 19, 2002.

FIELD OF THE INVENTION

[0002] The invention concerns a rotor for an electric motor, particularly an electric line-start motor.

BACKGROUND OF THE INVENTION

[0003] The term electric line-start motor is used for hybrid a.c. motors, which represent a combination of an a.c. asynchronous motor with an a.c. synchronous motor. Such an electric line-start motor comprises a stator with several stator windings. The stator windings generate a rotating field, which generates a voltage in a rotor, which causes the rotor to rotate. The rotor of an electric line-start motor comprises features of both the rotor of an a.c. asynchronous motor and of the rotor of an a.c. synchronous motor. Line-start motors can also be dimensioned for one-phase mains supply, if required using an operating capacitor.

[0004] In the rotor of an a.c. asynchronous motor, which can also be called induction motor, conductor rods, for example of aluminium or copper, are located substantially in the axial direction. At the front sides of the rotor, the conductor rods can be connected by short-circuit rings. Together with the short-circuit rings, the conductor rods form the rotor winding and can have the shape of a cage, which is the reason why such a rotor is also called a squirrel cage rotor. During operation, the rotating field of the stator winding causes a current change in the conductor loops of the initially still standing rotor. The current change speed is